

## **Update on Mining Sites Affected by Administrator McCarthy's Work Cessation Directive 10/02/2015**

On August 14, 2015, Jim Woolford and Reggie Cheatham sent a memo to the regions instructing them to stop remedial and removal assessment/investigative work at Superfund hardrock mining/tailing sites in light of the August 5, 2015, Gold King Mine release and Administrator McCarthy's subsequent August 12, 2015, work cessation directive. In response to that memo, regions, in coordination with the Office of Superfund Remediation and Technology Innovation (OSRTI), identified 15 sites of concern where ongoing or planned work stopped (10 sites), or where work was allowed to continue based on site-specific discussions between OSRTI and the regions that determined the sites met exceptions identified in the memo, primarily that stopping work would increase site risk (5 sites).

On September 4, 2015, OSRTI sent the Superfund regional division directors a memo describing a process to resume or start work at the 10 sites where EPA ceased field investigation work. The process includes written/electronic communications and discussions among OSRTI, affected regions, the Agency's mining experts, and, for any removal actions, the Office of Emergency Management. Discussions are framed around the internal review team's findings/recommendations included in their August 24, 2015, report, including using a tiered approach to evaluate sites. Building upon the tiered approach recommendation, the September 4 memo included three categories of mine site conditions that could apply to the 15 sites. This memo updates the descriptions of the hydraulic hazards included within those three categories of mine site conditions to more clearly distinguish between them. The categories include:

**Category 1:** Sites that have been well characterized for mining fluids and present no known hydraulic hazard with the potential to create an emergency because they have either no known water in the mine or fluid flows do not have the potential for pressure buildups that would lead to an emergency situation. Recommended actions: work can continue based on a determination of low/no risk or based on examination of site-specific conditions.

**Category 2:** Sites with fluid mine waste where water pressure has not been characterized. It is not known if the mine fluids pose a hydraulic hazard with potential to create an emergency. Recommended actions: site work stoppage should remain in place, and information gathering needs to continue so that a conclusive site work cessation determination can be made.

**Category 3:** Sites with mining fluids posing a probable hydraulic hazard with the potential to create an emergency situation. Recommended actions: site work stoppage should remain in place until adequate emergency planning has occurred.

Using the process outlined in the September 4, 2015, memo, OSRTI senior management and regional program managers jointly determine into which category each of the 10 sites falls, and whether and when work can restart, as applicable. The first two sites where work has resumed are Standard Mine in Region 8 and Leviathan Mine in Region 9. Based on written summaries and subsequent technical discussions on site-specific circumstances between OSRTI managers and mining technical experts with regional counterparts, OSRTI and regional management determined it was appropriate to resume work at these two sites. In particular, those site-specific discussions verified that the procedures to be resumed were low risk and that there were appropriate emergency and notification procedures in place prior to re-starting work. Additional discussions regarding the remaining eight sites, as appropriate, are planned. Please see the following table for more site-specific updates:

Site / Mine Name	State	Region	Status as of 10/2/2015
<b>Work Stopped Pending Further Investigation</b>			
SW Jefferson County	Missouri	7	The Region will request support from the US Army Corps of Engineers on dam design and construction plans prior to proceeding with additional on-site work at the tailings dam. The Region will also ensure appropriate emergency and notification procedures will be in place prior to site work. Not all work has stopped. We did stop work planned on a tailings dam, but residential yard removal work continues in order to address the human health threat.
Standard Mine	Colorado	8	<p><b>Standard Mine investigation resumed on September 4, 2015, after a study was conducted showing that appropriate measures were being carried out to continue work.</b> On September 3, 2015, mining experts from EPA regions 1, 9 and 10 participated in a conference call with Region 8 to discuss this mine, which presented some concern of hydraulic risks and the potential for a large-scale release. Participants reviewed the findings and conclusions of a focused independent, third-party technical review of the Region's plan to further investigate site-specific conditions related to the mine and mine pool build up. Based on that review, the participants determined that the probe hole dewatering characterization plan and 30-60 percent designs associated with the Level 1 adit rehabilitation efforts are appropriate and, therefore, work should continue. While activity at this site is not urgently required, discussion participants also determined that EPA needed to be proactive to complete investigation of the mine working collapses and water buildup this fall so appropriate response actions can be implemented early next year.</p> <p>Further, the Region verified that the site's management plan contains an Emergency Action Plan (EAP) and includes provisions for mine emergencies including cave-ins. More importantly, it also contains an emergency notification call-down list with outreach protocols in the case of a significant flow or blow out. The Region also noted that the site team would hold a table top emergency communication exercise to test satellite telephone equipment and to verify the Town of Crested Butte and Gunnison County's local emergency planning committees' telephone numbers.</p>
Leviathan Mine	California	9	<p><b>Some work has re-started at the site, per discussions and agreement between Region 9 and Headquarters on September 11, 2015.</b> Remedial investigation sampling of Leviathan Creek will continue as it is necessary to determine the risk, nature and extent of contamination. This work poses no hydraulic risk and should proceed so that site characterization can continue. Also, after four years of drought, many of the 28 ponds are currently dried out, and taking advantage of these low water levels will facilitate sampling, if done soon. The urgency for sampling is heightened given the potential El Nino effects predicted for CA during the rainy season. Additionally, a mitigation and communication plan will be developed before sampling commences, and EPA will oversee the work. The beaver dam removal will not continue until additional analysis is done to identify the appropriate removal action and ensure emergency precautions are in place. The site's RPM, with contractor support, visited the site to evaluate conditions, consulted with the immediate project team, a beaver expert and had Region 9's mine specialist review recommendations for this work. These recommendations were further discussed as part of the September 11, 2015, discussion.</p>

<b>Work Stopped Pending Further Investigation (continued)</b>			
Iron Mountain Mine	California	9	The planned chute plug replacement was delayed until next year to allow adequate time to analyze the hydraulic risks and develop a safe and appropriate plan for the work. The Region will also ensure appropriate emergency and notification procedures will be in place prior to site work. Ongoing AMD treatment and RI/FS is continuing. Only one planned chute plug replacement is stopped for now.
<b>Field Work Initiation is on Hold</b>			
Argonaut Mine	California	9	The integrity of the dam is in question, based on prior analyses by the US Army Corps of Engineers. Potential dam failure presents a real health and safety as well as environmental risk to the citizens of Jackson, CA, and surrounding communities. While dam retrofit plans and designs are underway and being coordinated with the State [construction hoped for 2016], additional safety measures including emergency storm water management options are being discussed due to the potential for heavy storm events brought on by the expected El Nino weather patterns. Dam retrofit design work and emergency planning efforts are underway. Discussions underway with California on emergency storm water management options.
<b>Further Assessment Needed to Determine Whether Work Should be Conducted</b>			
Flat Creek/Iron Mountain Mine	Montana	8	No mechanical activities are occurring. State has performed an EE/CA and is working on an action memo.
Upper Tenmile Creek	Montana	8	No site work is planned for this year.
Camp Bird Mine	Colorado	8	R8 On-Scene Coordinator has been conducting the assessments and no work has been initiated.
James Creek Release	Colorado	8	R8 On-Scene Coordinator has been conducting the assessments and no work has been initiated.
Eagle River	Colorado	8	R8 On-Scene Coordinator has been conducting the assessments and no work has been initiated.
<b>Initially Flagged but Site-Specific Determinations Allowed Work to Proceed</b>			
Callahan	Maine	1	Region 1 continued installation of a horizontal drain at the tailings impoundment base to allow better drainage. This work was completed on September 3, 2015. While some construction is continuing for a few more weeks on the passive treatment system, the site's next construction phase will not continue until next spring.
Bullion	Montana	8	Region 8 continued work at the Bullion Mine to perform a variety of activities including installation of a relief valve to prevent a blowout and to pump acid mine drainage water for treatment before discharge.
Captain Jack	Colorado	8	Region 8 continued with work to install external monitoring systems in advance of work that is planned for next spring.
Pennsylvania	Colorado	8	Region 8 continued work to close the bulkhead to shut off water.
Red and Bonita	Colorado	8	Region 8 grouted the bulkhead that was installed this summer.